

83. An antibody which comprises an antigen binding portion of an amino acid sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:19, an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

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84. The antibody of claim 83, comprising at least one antigen binding portion of an amino acid sequence of SEQ ID NO:8 or an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126 and at least one antigen binding portion of an amino acid sequence of SEQ ID NO:19 or an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

85. The antibody of claim 83, which comprises an antigen binding portion of an amino acid sequence selected from the group consisting of SEQ ID NO:8 and SEQ ID NO:19.

86. The antibody of claim 83, which comprises an antigen binding portion of an amino acid sequence from SEQ ID NO:8 and an antigen binding portion of an amino acid sequence from SEQ ID NO:19.

87. The antibody of claim 83, which comprises an antigen binding portion of an amino acid sequence selected from the group consisting of an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126 and an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

88. The antibody of claim 83, which comprises an antigen binding portion of an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126 and an antigen binding portion of an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126.

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89. An antibody which comprises at least one antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:17, a nucleic acid sequence which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

90. The antibody of claim 89, comprising at least one antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence of SEQ ID NO:6 or a nucleic acid sequence which encodes the variable heavy chain of the hybridoma having ATCC deposit no. HB-12126 and at least one antigen binding portion encoded by a nucleic acid sequence of SEQ ID NO:17 or a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

91. The antibody of claim 90, which comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NO:6 and SEQ ID NO:17.

92. The antibody of claim 90, which comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence of SEQ ID NO:6 and an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence of SEQ ID NO:17.

93. The antibody of claim 90, which comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of a nucleic acid sequence which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

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94. The antibody of claim 90, which comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126 and an antigen binding portion of an amino acid sequence encoded by a nucleic acid which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

95. The antibody of claim 83 or 89, which is a monoclonal antibody.

96. The antibody of claim 83 or 89, which is an IgG.

97. The antibody of claim 83 or 89, further comprising a label.

98. The antibody of claim 97, wherein the label is a radioisotope.

99. The antibody of claim 98, wherein the radioisotope is selected from the group consisting of ¹³¹I, ¹¹¹In, ⁹⁹mTc, ³²P, ¹²⁵I, ³H, ¹⁴C, and ¹⁸⁸Rh.

100. The antibody of claim 99, wherein the radioisotope is ¹¹¹In.

101. The antibody of claim 83 or 89, further comprising a cytotoxic moiety.

102. The antibody of claim 101, wherein the cytotoxic moiety is a compound which emits radiation.
103. The antibody of claim 102, wherein the compound which emits radiation is an α , β , or γ -emitter.
104. The antibody of claim 102, wherein the compound which emits radiation is a β and γ -emitter.
105. The antibody of claim 103, wherein the α -emitter is selected from the group consisting of ^{212}Bi , ^{213}Bi , and ^{211}At .
106. The antibody of claim 103, wherein the β -emitter is selected from the group consisting of ^{186}Re or ^{90}Y .
107. The antibody of claim 106, wherein the β -emitter is ^{90}Y .
108. The antibody of claim 103, wherein the γ -emitter is ^{131}I .
109. The antibody of claim 101, wherein the cytotoxic moiety is a molecule of plant, fungal, or bacterial origin.
110. The antibody of claim 109, wherein the cytotoxic moiety is a molecule of bacterial origin.
111. The antibody of claim 101, wherein the cytotoxic moiety is a biological protein.
112. The antibody of claim 83 or 89, which initiates an endogenous host immune function.

113. The antibody of claim 112, wherein the endogenous host immune function is complement-mediated cytotoxicity.

114. The antibody of claim 112, wherein the endogenous host immune function is antibody-dependent cellular cytotoxicity.

115. The antibody of claim 83 or 89, which comprises a Fab, F(ab')₂ or Fv fragment.

116. A composition comprising the antibody of claim 83 or 89 and a pharmaceutically acceptable carrier.

B₁ 117. A composition comprising the antibody of claim 97 and a pharmaceutically acceptable carrier.

118. A composition comprising the antibody of claim 101 and a pharmaceutically acceptable carrier.

119. A composition comprising the antibody of claim 104 and a pharmaceutically acceptable carrier.

120. A composition comprising the antibody of claim 107 and a pharmaceutically acceptable carrier.

121. An isolated cell which produces the antibody of claim 83 or 89.

122. The cell of claim 121, which is a lymphocytic cell line.

123. The cell of claim 121, which is a cell line containing one or more molecular constructs encoding the antibody.

124. A kit for detecting prostate cancer comprising the antibody of claim 97 and means to detect the label.

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125. A method for detecting prostate cancer comprising contacting a biological sample with the antibody of claim 97 under conditions effective to permit binding of the antibody to prostate specific membrane antigen in the sample and detecting the label

126. A method for detecting prostate cancer comprising administering the antibody of claim 97 to a patient and detecting the label.

127. A method for treating, preventing, or delaying development or progression of prostate cancer comprising administering the antibody of claim 83 or 89 to a patient under conditions effective to treat, prevent, or delay development or progression of the prostate cancer.

128. A method for treating, preventing, or delaying development or progression of prostate cancer comprising administering the antibody of claim 97 to a patient under conditions effective to treat, prevent, or delay development or progression of the prostate cancer.

129. A method for treating, preventing, or delaying development or progression of prostate cancer comprising administering the antibody of claim 101 to a patient under conditions effective to treat, prevent, or delay development or progression of the prostate cancer.

130. A method for treating, preventing, or delaying development or progression of prostate cancer comprising administering the antibody of claim 104 to a patient under conditions effective to treat, prevent, or delay development or progression of the prostate cancer.

131. A method for treating, preventing, or delaying development or progression of prostate cancer comprising administering the antibody of claim 107 to a patient under conditions effective to treat, prevent, or delay development or progression of the prostate cancer.

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132. The method of claim 127, wherein the antibody is administered in conjunction with a second therapeutic modality.

133. The method of claim 132, wherein the second therapeutic modality is surgery.

134. The method of claim 132, wherein the second therapeutic modality is radiation.

135. The method of claim 132, wherein the second therapeutic modality is chemotherapy.

136. The method of claim 132, wherein the second therapeutic modality is immunotherapy.

137. The method of claim 132, wherein the second therapeutic modality is hormone treatment.

138. The method of claim 137, wherein the hormone treatment comprises treatment with estrogen.

139. The method of claim 137, wherein the hormone treatment comprises treatment with an anti-androgen agent.

140. The method of claim 139, wherein the anti-androgen agent is an agent which blocks or inhibits the effects of testosterone.

B, 141. A method of treating, preventing, or delaying development or progression of prostate cancer metastases comprising administering the antibody of claim 83 or 89 to a patient under conditions effective to treat, prevent, or delay development or progression of the prostate cancer metastases.

142. The method of claim 141, wherein the metastases are bone marrow metastases.

143. The method of claim 141, wherein the metastases are lymph node metastases.

Respectfully submitted,

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